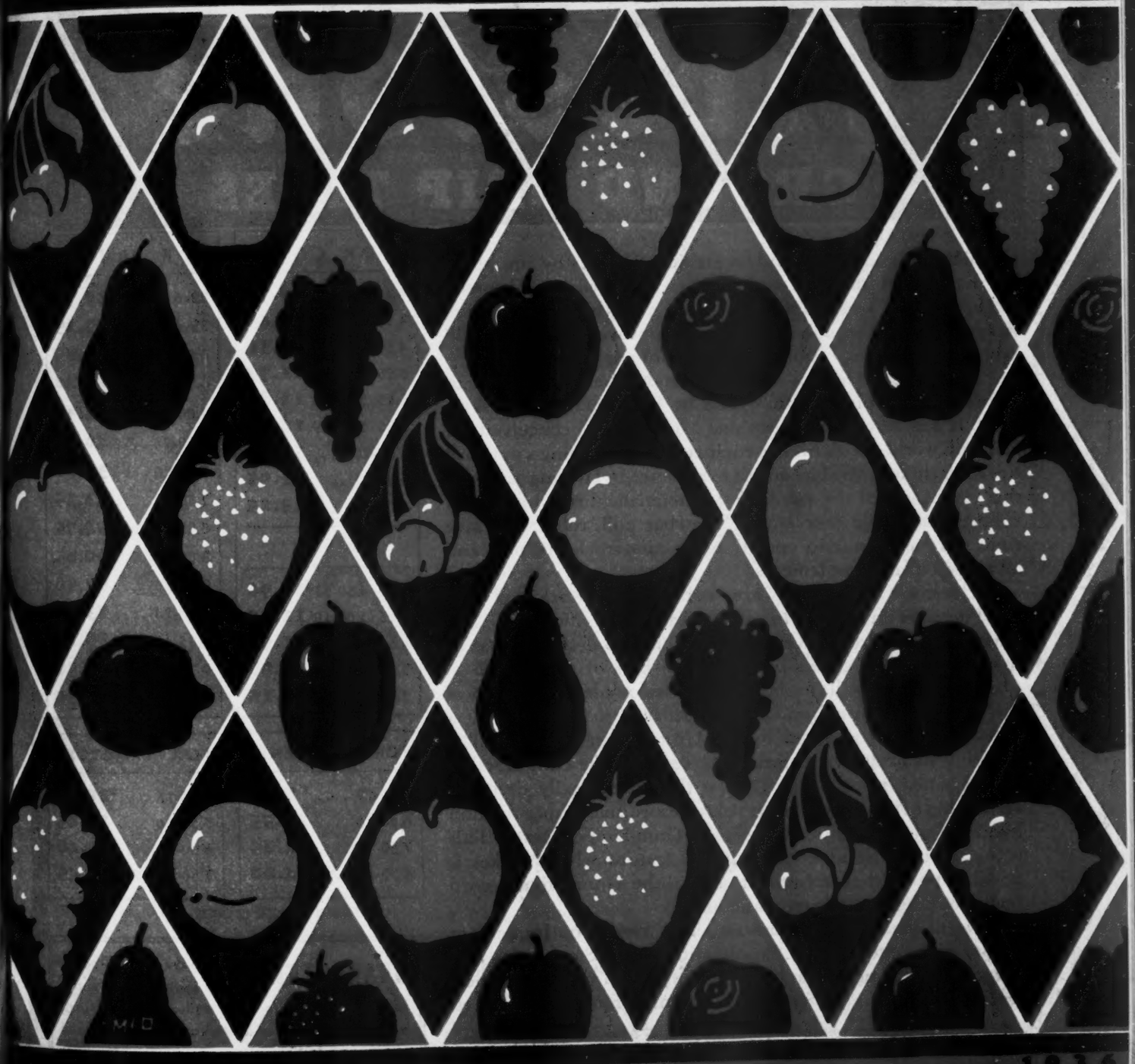
AMERICAN FRUIT GROWER



NOVEMBER 1936

SAVE time and money and get greater efficiency by equipping the rear of your car and truck with a pair of Firestone Ground Grip Tires. They will give you the super-traction needed to pull through mud and unimproved roads and will save you the time, trouble and money of applying chains.

Harvey S. Firestone was born and raised on a farm in Columbiana County, Ohio, which he has operated ever since 1904. It was here on this farm that Mr. Firestone conceived the idea and worked with his tire engineers in developing a practical tire for farm use. Mr. Firestone's experience in farming gave him the realization of the need for a pneumatic tire with lugs of rubber that would increase the drawbar pull, roll easier, save time and speed up farm operations on cars, trucks, tractors and all wheeled farm implements.

Firestone engineers are continually working with Mr. Firestone on his farm to secure greater farm efficiency. They developed the Ground Grip Tire which is so designed that in soft mud roads it cleans itself and the bars of rubber are so placed that they will not bump on paved roads. The design of this tire is so unusual and its performance so amazing that a patent has been granted by the United States Patent Office covering its exclusive features. The secret of the extra traction of Firestone Ground Grip Tires is the scientifically designed rubber lug of the tread. Under this extraordinary super-traction tread are placed two extra layers of Gum-Dipped cords. This is a patented Firestone construction feature which makes it possible to weld this heavy tread to the Gum-Dipped cord body, making it one inseparable unit.

Go to your nearest Firestone Tire Dealer or Implement Dealer or Firestone Auto Supply and Service Store today and ask to see these money-saving tires. And when you order a new tractor or implement, specify Firestone Ground Grip Tires.

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5.25/5.50-19	12.25
5.25-20	11.50
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7.50-24	43.35
8.25-20	54.75
8.25-24	60.85
9.00-20	67.50
9.00-24	73.25
9.75-20	88.15
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GUARANTEE—This heavy Super-Traction tread is guaranteed not to loosen from the tire body under any conditions, and all other parts of the tire are fully guaranteed to give satisfaction.

HERE'S A PIPPIN OF A CONTROVERSY!

HOW FAST CAN A FAST PICKER PICK

? ? ? ? ? ? ? ? ? ? ?

In our September issue we published an article entitled, "Champion Apple Picker Tells How He Breaks Records," by Roger Carl Moore. The magazine was hardly off the presses before arguments started flying faster than the apples referred to in the article. In fact, our office force is establishing some sort of a "picking record" just picking up these letters as fast as the mailman dumps them in the door. It's a pippin of a controversy! Herewith we print a letter from Henry G. Miller, of Sharon, Wis., who even supports his argument with a diagram which is reproduced below. The champion, like a champion, comes right back with a "two-fisted" reply. Then Mr. Miller gets his second wind and says—but go ahead, read 'em and root for whichever side you're going to line up with.

JUST FOR FUN

American Fruit Grower,
Cleveland, Ohio.
Gentlemen:

In looking over the September issue yesterday I was quite amused at the TALE about the champion fruit picker.

I was raised out in the fruit growing state of Missouri, the "show-me" state. We don't always take the other fellow's word for things.

I note this party made his record in the month of October, and on a foggy day for a start. By reference to the almanac I find that on the 15th of the month the sun rises at 5:15 A.M. and sets at 5:16 P.M. In the mountain section of Maryland there is not much of a dawn or afterglow at this time of the year.

O.K. Let's say 14 hours of daylight. 14 x 60 x 60 equals 50,400 seconds. 276 bushels of standard 180 count apples equals 49,480 apples, or to make this record it would be an apple every time the watch ticked with no time out for any other move.

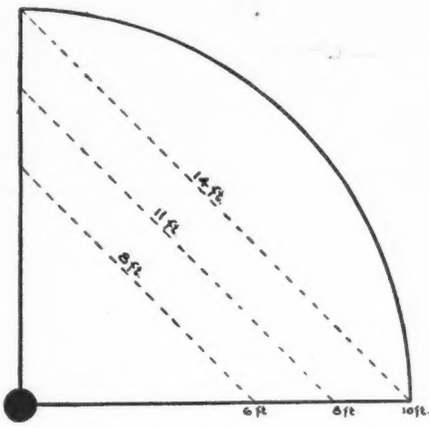
He states he was "making from 20 to 30 bushels per hour. Thirty bushels per hour means one every two minutes. That would be quite a job if they were all right on a table. Oh! Oh!

He states that he used a 22-foot ladder on 20-year-old Baldwins and made only three or four sets of the ladder per tree. Do you think a 20-year-old Baldwin would require a 22-foot ladder? They must grow like Lombardy poplars. Most trees that I have seen while in bearing are wider than they are high.

Let's suppose this tree did grow like a poplar and he sets four times with the base six feet from the trunk. By reference to the sketch you will note that the sets would be eight feet apart. Can he pick apples that fast and reach out four feet for some of them? NOPE.

Tell this fellow that every winter they hold a liar's contest at Burlington, Wis., and award a leather medal to the tallest yarn. ALL FOR FUN. I really believe he would be champion there without any question.

Respectfully,
Henry G. Miller,
Sharon, Wis.



As the diagram illustrates, Mr. Miller backs up his "letter of doubt" with a drawing to show that the sets would be eight feet apart and Mr. Moore's reach would have to be four feet.

A TWO-FISTED REPLY

Dear Mr. Miller:

Your letter to AMERICAN FRUIT GROWER disputing my apple-picking record of 276 bushels in one day as outlined in the September issue has been referred to me by the editor. I shall answer your objections in the order raised.

The record was set during a standard 10-hour day, beginning at 7:00 A.M. and closing at 6:00 P.M. I took practically a full hour for lunch, although many of the other pickers did not.

I have never counted the number of apples in a bushel, but there is no necessity for picking one apple at a time, as you assume. A good experienced apple picker acquires great dexterity and should be able to maneuver two or more apples into his picking sack with one hand. Remember that he also has two hands going constantly. I never timed myself on a single bushel, but I saw others do it, and any good picker, granted suitable conditions, should pick a bushel of apples in little more than a minute. I once picked 20 bushels off the ground in a half hour.

You are correct in assuming that my average speed was from 25 to 30 bushels per hour. On good picking in flat areas it stood regularly at 30 bushels per hour. If any person can pick more than that, he is better than I am, which is quite possible. I never intended to claim that I set a national record. Maryland mountainsides are not conducive to that, and I remember hearing unofficially some years ago that 300-bushel days in the Northwest were not absolutely unknown. Such records are, of course, made only by first-class pickers with the best of equipment under top-notch conditions.

You are also correct in assuming that my 22-foot ladder topped the Baldwins I was picking. However, ladders were issued at the beginning of the season, to be used on all sizes of trees, and I always chose the longest possible, so I would not be handicapped on the tall York Imperials and Winesaps. The Baldwins spraddled considerably, although they were considerably closer pruned than the Missouri trees you mention, to judge from the tone of your letter. Much picking could be done from the ground, and sometimes I could pick an outlying limb and part of the central column with one set of the ladder. I averaged three or four sets per tree, and I usually cut a swath straight up the tree about seven or eight feet wide.

Please remember that I did not run far

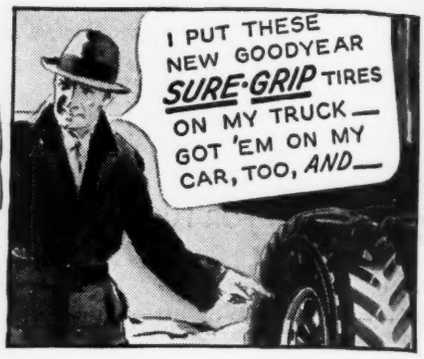
(Continued on page 23)

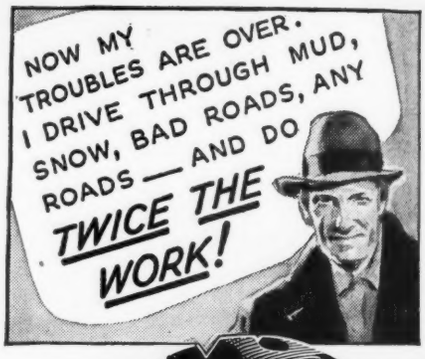
WE'RE GOING TO SETTLE THIS EVEN IF IT TAKES ALL WINTER

How Fast Can a Fast Picker Pick? Right at this moment we—the editors—don't know but we're going to find out even if it takes all winter. This argument is open to everybody, so come on and say your say on the subject. Best letters will be printed on this page each month. Address PIPPIN PICKING CONTEST, AMERICAN FRUIT GROWER, 1370 Ontario St., Cleveland, O.

Come On You Champs—(Ex and Otherwise)—Let's Hear From You!

"I'LL SAY THEY'RE SURE-GRIP— THESE GOODYEARS GO ANYWHERE!"





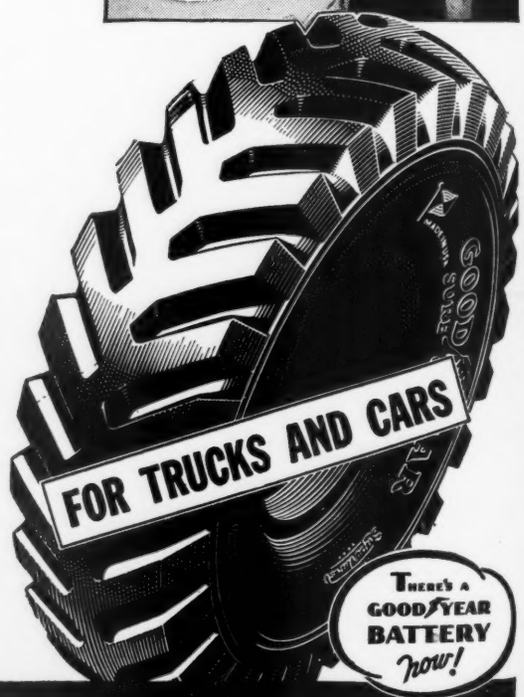
NOW YOU CAN DRIVE ANYWHERE WITHOUT SLIPPING . . . WITHOUT CHAINS

You take all the uncertainty from winter driving when you put Goodyear Sure-Grips on your truck or car.

Goodyear Sure-Grips go anywhere. Their tough, heavy lugs bite deep into mud, sand or loam. Their scientifically-designed tread cleans itself with every revolution to be ready for the next firm hold. Their high shoulders prevent slipping and give extra side traction in soft earth or snow.

If you do much off-the-hard-road driving, don't wait for your present tires to wear out. Keep them for next summer. Save time and money with Sure-Grips while the going is bad.

THE GOODYEAR TIRE & RUBBER COMPANY, INC., AKRON, OHIO



AND HERE IS ANOTHER GOODYEAR LEADER— THE GREATEST TRACTOR TIRE EVER BUILT!

On your tractor use the Goodyear All-Traction Tractor Tire and you will profit from the advice of farmers in every section of America. The Goodyear Tractor Tire has 50 per cent more traction, 30 per cent more drawbar pull, 100 per cent more shoulder tread, 48 per cent more rubber. It has proved itself in every kind of farm work to be the greatest tractor tire ever built.

GOODYEAR ALL-TRACTION TRACTOR TIRE

GOODYEAR SURE-GRIP

A MUD TIRE . . . A SNOW TIRE . . . A GO ANYWHERE TIRE

AMERICAN FRUIT GROWER

TITLE REGISTERED IN U.S. PATENT OFFICE

NOVEMBER 1936

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THE ART OF HORTICULTURE

IT has been said that horticulture is primarily an art but it is intimately associated with science at every point. Here we have an important truth, for horticulture is truly one of the oldest of the arts and yet the art is ever new to each generation. The whole modern tendency is toward a scientific horticulture, and rightly so, but let us not forget that man learns by doing, by acquiring particular skill in manipulation, and that this perfection in the doing becomes an art.

One prominent horticulturist has expressed this thought by saying that "the basic principles of horticulture rest on the fact that man has ever sought not only the explanation of the drama of his own life, but also a reverential understanding of the things about him. His mind can never be wholly satisfied with the cold ordering of science. He finds value in existence in more than that—he demands that his spirit find freedom in beauty, love, loyalty, duty, reverence, as well. Man is eager to endow his surroundings with his own human instincts, feelings, desires, and companionships. This feeling still escapes analysis, but on it is based the primary theme of horticulture, an intimacy with plants so strongly desired that the individual plant is selected for care. Next to the beauty of untouched mountain, desert, prairie, or woodland, the work of the horticulturist stands supreme."

There is more in orcharding than hard, cold, scientific facts; more than money making; there is a place for breadth of thought, imagination, and diversification of interest such as can be found in few vocations. The activity in the orchard at blossom time, the coloring of fruit, the aging of trees, the peculiarities of varieties, and the growth of flower buds, are all intriguing to an observing person. One can have sentiment in these natural phenomena without being sentimental.

One is often surprised to learn how poorly informed the general public is in these matters. But every exposition or fruit show demonstrates how many are interested in learning more of the "secrets" of fruit production. They wonder where new varieties come from and how they are produced. Do fruits come true from seed—and/or why not? Why is the tree in one's back yard unfruitful and those in the commercial orchard bending with fruit? These questions show an intelligent curiosity and have challenged the thinking of men since the beginning of time.

Every experienced orchardist knows that there are only certain men whom he will allow to spray his trees. Some who are quite capable in other respects never seem to realize in the spring time that there will be apples to pick from the trees in autumn. They do not spray systematically underneath and about the tree but do "spot" spraying to the infinite detriment of the ultimate crop. Some workmen make good pruners or become adept at grafting and budding, and others are only mediocre even though they know or understand the science involved.

Few who buy attractive fruits on the market have the faintest conception of what lies behind their production. The sound of the tractor, the whirr of the sprayer, the thinning and picking crews at work, the packing house operations, and finally the storage, transportation and merchandising perhaps through several agencies, are little dreamed of. In all this lies an art, if it is well done—the art of horticulture which can well be termed the refinement of agriculture. When the proverbial "man on the street" comes to talk of fruit varieties as a subject of common interest as we have heard them do in the great shows abroad, then he is going to do much for the industry.

But it must be said that from the attendance and interest of the crowds which attended such places as the recent International Horticultural Exposition at Chicago, the fruit shows in the several states, and the apple and cherry blossom festivals, one is assured of a native interest in this most delightful of arts.

America outranks all other countries in the development of the fruit industry, so let us train ourselves and our neighbors to a better understanding and encourage the art as well as the science of Horticulture.

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AMERICAN FRUIT GROWER

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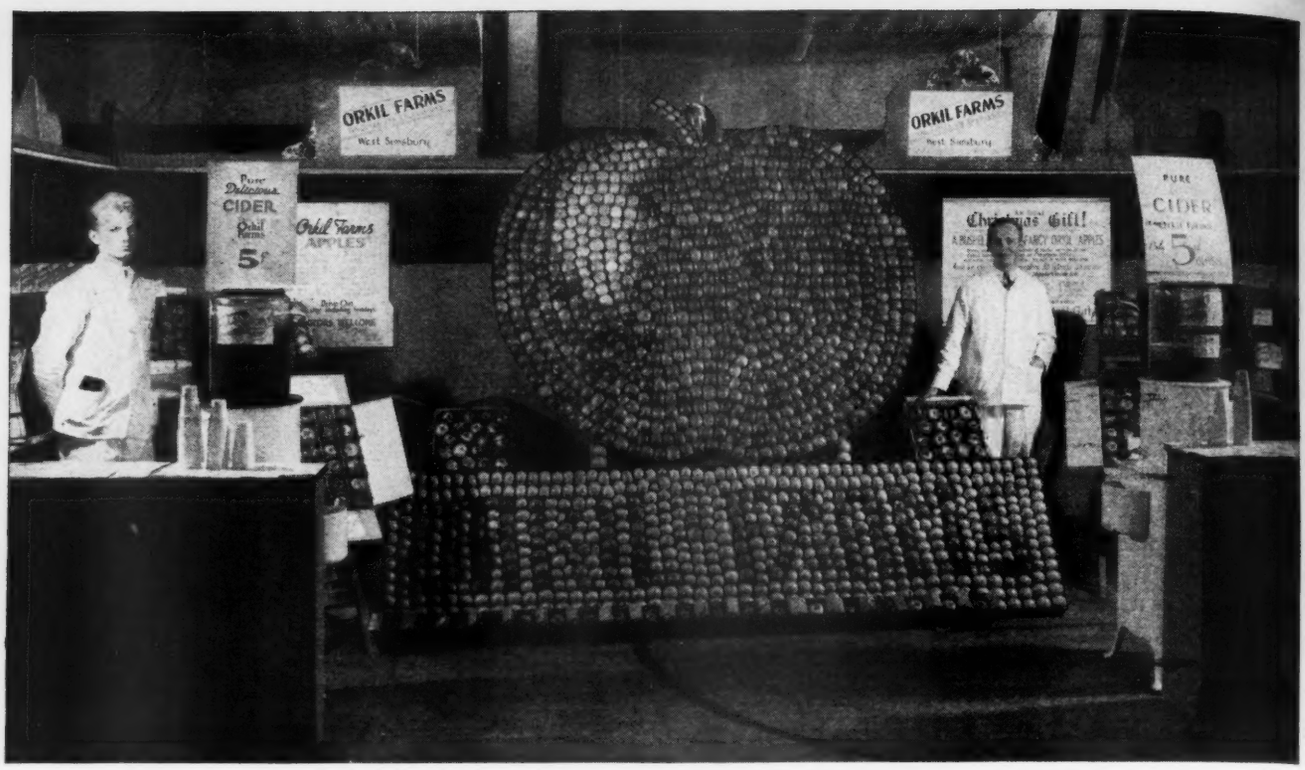
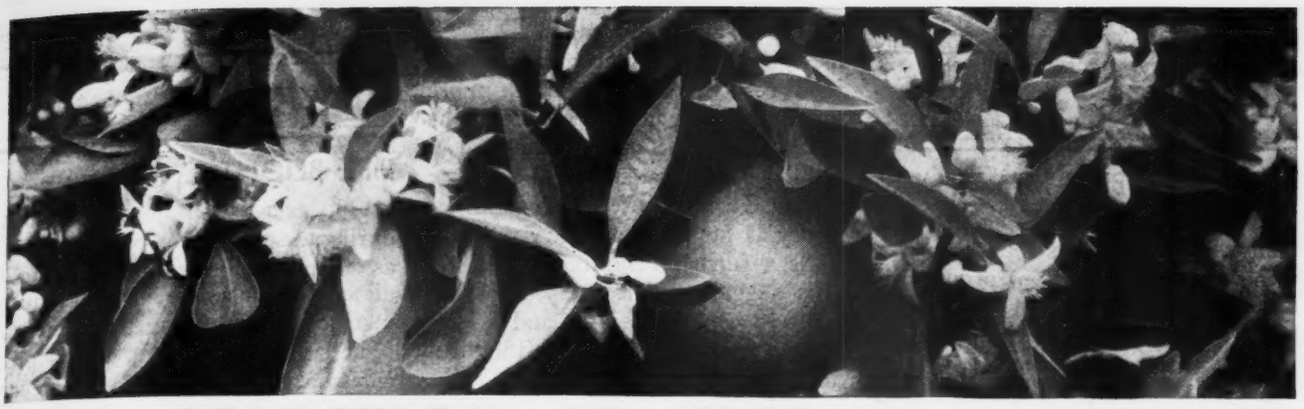


O. P. Kilbourn, former New York and Detroit advertising executive, who now operates the Orkil Fruit Farm at West Simsbury, Conn., applied advertising principles to his display at the Hartford (Conn.) Food Show, illustrated above. Mr. Kilbourn says that his "biggest apple" ever shown in Connecticut was viewed by thousands during the show and justified itself by producing many profitable wholesale and retail orders.

"GOING TO MARKET" THE MODERN WAY

Citrus growers, always progressive in advertising and merchandising, won top honors at the Los Angeles County (Calif.) Fair with the Mutual Orange Distributors exhibits, one of which is shown below. The presentation of citrus displays featuring figures of popular nursery stories, portrayed by fruit and Cellophane, attracted much consumer attention during the fair.



BUD SELECTION IN CITRUS VARIETIES

And a Plea for All Fruit Growers to Undertake Some Phase of This Fascinating Work

By A. D. SHAMEL

Principal Physiologist, Division of Fruit and Vegetable Crops & Diseases, Bureau of Plant Industry, U. S. D. A., Riverside, California.

A close-up of Washington Navel orange flowers and fruits on a tree selected for desirable fruiting characteristics is shown above.

IN reply to the request of the editor of AMERICAN FRUIT GROWER for an article on some phase of the California citrus industry, I have selected as my subject the standardization, through bud selection, of the citrus varieties grown in that State. That this subject is fundamentally important to the citrus industry is a matter of rather common knowledge to all well informed and unprejudiced persons. The standardization of commercial varieties is important not only to the citrus industry in California, but the principles upon which it is based are also of major importance to all fruit growers, in the opinion of the writer.

The commercial citrus crop of California is produced through the use of the Washington Navel and the Valencia orange varieties, the Marsh grapefruit, and the Eureka and Lisbon lemon varieties, a total of five proved varieties including the two lemons which are sometimes considered as strains of a single variety sometimes termed commercially the "California" lemon. The use of only a few proved varieties is of great advantage to the citrus industry, not only from the production standpoint but also from that of marketing.

The maintenance of fruit-producing efficiency of the standard citrus varieties over long periods is believed to be possible through careful bud selection based upon intimate-tree knowledge and systematic progeny tests of selected parent trees. In the Washington Navel orange, experience along this line has demonstrated, both experimentally and commercially, that it is possible to eliminate inferior strains from propagation largely through scientific bud-selection practices. Furthermore, in progeny tests of carefully selected parent trees of the standard strain of the variety it has been discovered that some of the progenies are more uniformly like their parents than are others. In other words, some progenies are more inherently stable than others under the same cultural conditions. These performances have led us to believe that through the use of such progeny tests the efficiency of that variety for profitable fruit production can be maintained. There are good reasons for believing that the other commercial citrus varieties grown in California respond to systematic bud-selection in the same manner as has been the case in the Washington Navel orange.

A search for superior bud mutations in the trees of the California citrus varieties undertaken some years ago has begun to show results that are considered to be important from the standpoint of the development of superior strains arising from desirable bud mutations. Some of the results of this work to date, together with suggested methods of conducting such a search in these and other fruits, are outlined briefly herewith.

Some of the superior strains originating as bud mutations of the Washington Navel and the Valencia orange varieties, the Marsh grapefruit and the Eureka lemon varieties have been

(Continued on page 18)

. . . "Fruit growers should keep a sharp lookout for striking fruit or foliage variations in their trees and, if one or more are found that appear to have some valuable characteristics, find out as to whether or not the variations are inherent ones, bud mutations in fact."

BERRIES •

WILD BRAMBLES HARMFUL

Wild red raspberries that grow in many sections of the country are a menace to the successful production of cultivated raspberries, especially black raspberries. They are generally infected with one or more of the serious raspberry mosaic diseases and serve as a source of infection for raspberry plantings. In any control program for the raspberry mosaic diseases there must be a plan for the eradication of the wild red raspberries. It is advisable to remove all such plants within a thousand-foot radius of healthy cultivated plantings. Other wild brambles are of little importance in the dissemination of the mosaic diseases.

Although the wild plants may show little evidence of mosaic infection, Prof. L. M. Cooley, plant disease specialist at the New York Agricultural Experiment Station, has found, after five years of field study, that they are usually heavily infected with one or more mosaic, leaf curl and streak virus diseases. In addition to their infection with the diseases, Prof. Cooley has found that they support steady populations of the species of aphids which are the only known carriers of mosaic. In three experimental plantings at the New York station, the appearance of mosaic increased steadily for the first two years of study in spite of systematic inspection and roguing, but after the wild raspberries nearby were eradicated, mosaic infection steadily diminished for the next two years.

INCREASED PRODUCTION

During 1936, the Wisconsin strawberry harvest was produced on nearly 4000 acres and amounted to approximately 310,000 sixteen-quart crates. The production is a third more berries than have been produced in Wisconsin since 1931.

HEALTHY BERRIES HARDY

The healthy, vigorous raspberry plant will endure cold winter weather much better than a weaker plant, according to Dr. George M. Darrow of the U. S. D. A.

Contrary to popular opinion, winter hardiness of berries, particularly raspberries, is not completely dependent on winter temperatures or snow cover. When the plants are defoliated during the summer by anthracnose, leaf spot, mosaics and other diseases, they go into the winter with improper food reserves and are much more susceptible to winter injury. As the result of this defoliation, many varieties that have been known to be hardy in Canada have suffered from winter injury as far south as Maryland.

As a further insurance, therefore, it is suggested that every effort be made to control diseases and insects during the summer and, in turn, reduce defoliation.

IRRIGATION RESULTS

When W. H. Putnam near Duluth, Minn., decided to water his quarter-acre patch of Latham red raspberries he invested $20 in equipment and realized a profit of $75 at the end of the season.

A supply main passes Mr. Putnam's property which he tapped as a source of water supply. Three hundred feet of garden hose were purchased at a cost of $12 which was sufficient to take care of the patch.

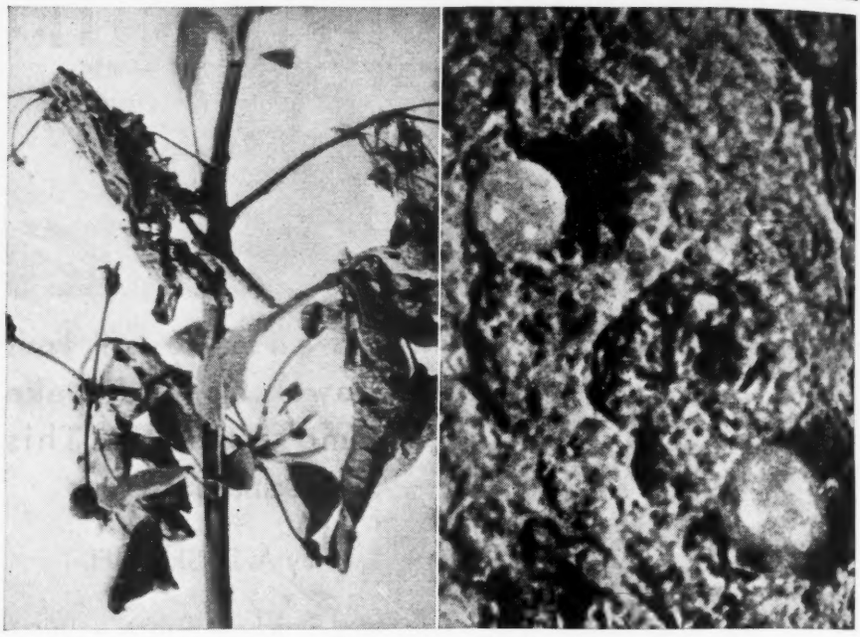
Before he started the irrigation the leaves of the plants were curling and some of the berries were already worthless. Mr. Putnam says: "When I started to irrigate they revived instantly. The leaves straightened right up and you could almost see the berries swell.

"I picked six crates a day and delivered them to our local marketing association. There were about 50 crates off the 900 hills and my profit was about $75 when all expenses were paid. This would amount to about $300 per acre. There would have been nothing at all without the water."

PEARS •

FIRE BLIGHT

Appearing with unusual intensity during the past season on pears as well as on apples and quinces, the bacterial disease known as fire blight has caused much concern among growers in many fruit sections. This disease is present to a greater or less extent every year, but may be epidemic during some seasons.



Left—Blossoms and twigs showing effect of severe blight infection. Right—Ooze protruding from the surface of a canker. This ooze contains the bacteria causing fire blight and is spread to healthy trees mainly by insects.

The bacteria causing the disease lives over winter in cankers, which are dead or sunken areas on the larger branches and trunk. When the growing season starts golden droplets of liquid containing the bacteria appear about the edges of the cankers. Insects come in contact with the droplets and carry the bacteria to new growth. Similar droplets appear about the infected twigs and fruit, and the bacteria may also be spread by splashing raindrops.

When the appearance of the blight is first noted, further spread may be checked by the removal of infected twigs. When the disease becomes epidemic, it is useless to attempt to cut out all of the infected growth. Care, however, must be taken to prevent the bacteria reaching the larger limbs and trunk, thus forming cankers and eventually girdling and killing the tree.

Where trees are less than half girdled the cankers may be cut out, bringing the wound to a point at the

(Continued on page 19)

FRUIT POLLINATION and ORCHARD ARRANGEMENT

By FREEMAN S. HOWLETT
Ohio Agricultural Experiment Station

PART II

THERE are several varietal combinations whose specific fruitfulness should be particularly mentioned. They are:

COMBINATIONS OF RELATED VARIETIES WHICH ARE FULLY FRUITFUL

(The female [seed] parent is given first)

McIntosh X Cortland
Cortland X McIntosh
McIntosh X Melba
Melba X McIntosh

COMBINATIONS OF VARIETIES UNFRUITFUL BECAUSE OF CLOSE RELATIONSHIP

(The female [seed] parent is given first)

Delicious X { Starking / Richared
Richared X { Delicious / Starking
Starking X { Delicious / Richared
Northern Spy X Red Spy
Red Spy X Northern Spy
Rome Beauty / Red Rome } X Gallia Beauty
Gallia Beauty X { Rome Beauty / Red Rome
Red Rome X { Gallia Beauty / Rome Beauty

COMBINATION OF VARIETIES UNFRUITFUL FOR REASONS YET UNKNOWN

(The female [seed] parent is given first)

Arkansas (Mammoth Black Twig) X Grimes Golden

In order to promote efficiency in spraying and harvesting operations, as many rows of one variety as can be effectively pollinated should be planted together. The maximum distance which a honeybee will fly effectively during a cold, wet blooming season is taken as the maximum distance that a tree may be separated from its pollinizer. Observations in various orchards have shown this maximum to be in general only about 100 feet. If 100 feet is arbitrarily chosen, it represents a maximum of two rows of permanent trees planted 40 to 50 feet apart. At the same time, it is obvious that only one permanent row of a variety, adjacent to only one row of its pollinizer, is unnecessarily close planting. Four rows of permanent trees should be planted together if pollinizing varieties are located on both sides. If the pollinizing variety is on one side only, then only two rows of permanent trees should be adjacent. The planting plans given in connection with Part 1 illustrate this point for rows of permanent trees. Space does not permit further amplification of the various possibilities in the order of arrangement. Whether you plant Stayman Winesap followed by Jonathan and Delicious or whether Jonathan is followed by Delicious and then Stayman Winesap is an optional matter so long as the above limitations are satisfied. This fact holds true in locating filler trees so that they, too, will be effectively cross-pollinated.

Questions may occur as to whether exceptions may be made in the case of Rome Beauty, Gallia Beauty, Baldwin, or Jonathan varieties which under very favorable conditions may produce half of a full crop when self-pollinated. Theoretically, more than four rows of these varieties may be

(Continued on page 17)

L. G. Dean, manager of the Grand River Orchards, Geneva, Ohio, looks over his fine crop of Delicious apples, the result, partly, of efficient pollination.

Planting of proper pollinizers in the young orchard will eliminate the necessity of supplying artificial bouquets at blossom time as is being done by this orchardist.

AFTER-PLANTING CARE OF YOUNG ORCHARD

By AN OLD TIMER

UNLESS some record has been kept of the placement of varieties at the time the trees are set, a map or plan of the orchard should be made after planting. Such a record will be of help later in locating varieties and in keeping records on individual trees.

As soon as the record of the variety arrangement has been made, the labels should be removed from the trees to prevent the wire from cutting into the growing branch or trunk, causing breakage or girdling.

One-year whips of apple and pear are cut back to from 28 to 36 inches after planting. For other fruit trees and two-year apples and pears, branches are removed to leave the desired framework. A low-headed tree is generally desired, and initial pruning should be done with this factor in mind. The "modified leader" system of pruning is probably the most popular for apples and pears and when this system is used all undesirable branches are removed, usually leaving three or four spaced evenly on the trunk in addition to the leader branch at the top of the tree. The remaining branches should be from 16 to 18 inches long to allow for development of secondary branches.

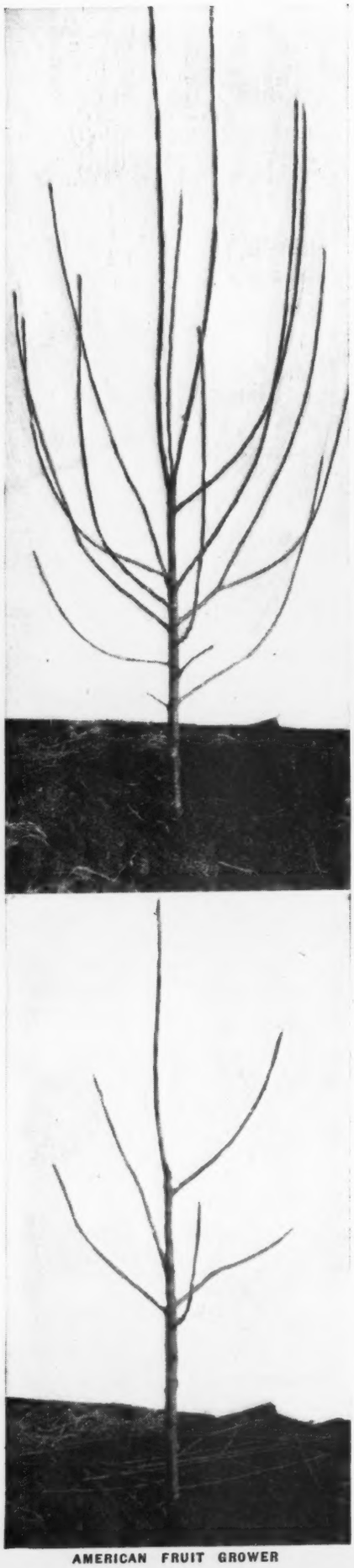
The thinning out of undesirable branches at planting time will cause less reduction in growth than if this work is performed later, since the roots are inadequate to supply moisture to all branches if left on the trees.

Peach trees are usually trained to the open head type of growth and should be headed back, leaving from 18 to 22 inches of the tree. If the branches are well-formed when the trees come from the nursery, three or four may be left, cutting them back to eight to 12 inches. When the branches are weak they should be cut back to a stub having one bud.

When two-year cherry trees are planted, four or five framework branches are selected and the others removed. The framework branches are cut back to from 20 to 22 inches. If one-year whips are used, they should be cut back to approximately 24 inches.

The grape vine is cut back at planting to a single stub with two buds. This operation is repeated at the end of the second season.

The brambles do not usually require pruning at planting unless it is the cutting back of broken canes.



A sturdy, easily-operated hand pruning shear is essential for quick pruning of the young trees after they are set. The shears should give a clean cut, as jagged edges on the pruning wounds invite entry of diseases and insects.

The young tree is most easily killed by the attacks of animals and all precautions should be taken to protect the tree. Mesh wire or hardware cloth, placed about the tree to a height of one and one-half to two feet, will give maximum protection.

Shading the south side of young trees with a board or stake for the first two years after they are set will help prevent infestation by the flat-headed apple tree borer.

Fruit trees do not generally need fertilizers until they reach the bearing age. When intercrops are planted, it is advisable to retain the original fertility of the soil by applying fertilizers so that the crops do not rob the trees of valuable nutrients. There are a number of intercrops and cover crops available for planting in the new orchard and their selection will depend on the desires of individual growers.

Small fruit plantings are cultivated from the time the plants are set, to keep down competitive weed growth and to conserve moisture. Whatever the type of row used, it is desirable to cultivate both ways if possible and finish the operation with a hand hoe. In emphasizing the importance of having the soil well prepared before the plants are set, it is stated that the best cultivation that may be given a small fruit crop during the first year is that which is made before the vines are planted.

In all types of fruit tree plantings and small fruit plots the problem of erosion should be given attention. If the land is sloping, the better practice is to sow a cover crop during the winter to prevent erosion. Steep land should have a permanent cover crop for protection.

Top—A two-year apple tree after planting showing the numerous branches on this type of tree that must be pruned after planting. Left—The same tree after proper pruning. This tree has been pruned according to the modified leader system.

APPLE CULTURE FOR DRY SECTIONS

By J. R. MASTERSON

THIS is not a get-rich-quick story of a man who prospered by doing phenomenal things. It is the authentic account of the methods and practices of an apple cropper who learned by degrees, and who pioneered apple culture in the drought country, where weaker hearts faltered and wagoned it back home for sympathy and security. It is J. Frank Browning who narrates this simple autobiography.

"Like many others who felt that there was a greater future on the frontier, in 1908 I borrowed enough money to pay the freight on a mixed box car containing a few household articles, one pony and a cow. I was shipped to Baird, Texas. There I operated a pump for the T. & P. Railway Company for several months, and then it dawned upon me one day that the man who depends upon wages for a livelihood will eventually lose his initiative and the urge to get ahead.

"At that time most of the sparsely cultivated ground over this section was planted to sorghum and cotton. A few planters had haphazardly set nooks to orchards and had carelessly tended them. It occurred to me that since these neglected trees were making very good growth, and were yielding small fruits in the riotous struggle with wild vegetation, a properly managed orchard would be profitable.

"I turned my attention primarily to apples, and bought 115 acres of land on credit that, accidentally, was adapted to apple culture. The top soil was sandy loam, with a moist clay subsoil, and an abundance of shallow water was available.

"After reading every available nurseryman's catalog, I purchased two varieties of apple trees, Delicious and King David. That again was a lucky accident, for since then I have planted a few trees of more than a dozen varieties and none has proved more drought resistant than the original selections. From one of the catalogs I learned that the Delicious will not fruit unless a pollinator is planted nearby. I did not make the mistake of a neighbor who planted 12 acres to Delicious and who became disgusted when his orchard was not fruitful.

"In the beginning of my adventures in apple culture, I made a blunder. I was advised to use a small amount of nitrate of soda in planting the young trees. "Small amount" was an indefinite measure and in the hole around the roots I dropped a teacup of this quick stimulus. The first year ample rain fell and those trees made a phenomenal growth. I soon had top-heavy heads with undersized trunks to support them. When the next spring's winds began to blow, it was distressing to see those immense heads bend to the ground. I would use no fertilizer the first year in planting another orchard.

"From experience, I am convinced that trees in the drier regions should be headed low when they are planted. After the first year, they form a shade which lessens the evaporation and protects the fine surface feeder roots.

"Throughout the dry sections we must always expect hot winds. Erosion is inevitable. Following a series of experiments to check the force of the hot winds and to prevent erosion, I found several methods practicable. In one block I subsoiled the ground by attaching a pointed scratcher to

(Continued on page 19)

In planting additional orchards, Mr. Browning is applying methods learned from previous experience. The above picture shows peanut vines growing in one of the young orchards.

here's real NEWS!

A scab-controlling, non-russet, non-injurious-to-foliage spray combination

DRY LIME SULFUR WITH 325 MESH SULFUR WETTABLE

(PATENT APPLIED FOR)

A New, Economical Way To Make Sulfur Wettable

It's real news to be able to announce the most economical, effective and safe summer spray for apples ever devised—Sherwin-Williams Dry Lime Sulfur with 325 Mesh Sulfur—Wettable. This combination does away with the use of wettable sulfurs using Dry Lime Sulfur as the wetting agent, which in itself is a most effective fungicide. You can mix yourself in your own spray tank and secure a scab-controlling, non-russeting, non-injurious-to-foliage combination which spreads uniformly and adheres tenaciously to fruit and foliage. There's news too—GOOD NEWS—in the added fact that this new combination will cut your summer fungicide spray bill ONE-THIRD by doing away with the use of expensive wettable sulfurs.

THIS SPRAY SCHEDULE ASSURES
FINE FINISH—FINE COLOR—HEALTHY FOLIAGE

This newly devised combination—Sherwin-Williams Dry Lime Sulfur with 325 Mesh Sulfur—Wettable—protects your crop against scab, against the risk of russeting from the use of Liquid Lime Sulfur, against foliage injury—and cuts the cost of expensive wettable sulfurs one-third; assures you of A-Grade Apples of Fine Finish and Fine Color.

THE SHERWIN-WILLIAMS CO.
DRY LIME SULFUR—SULFUR
1937 SPRAYING SCH

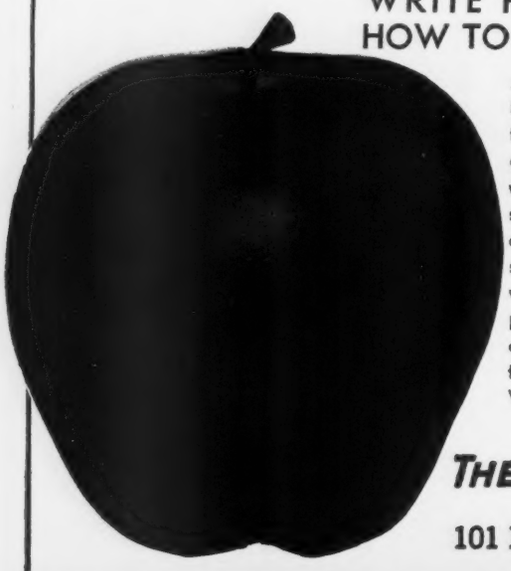
No Scab	No Russet	N
Pre-Pink and Pink	3 lbs. D 5 lbs.	
Calyx	2 lbs. 4 lbs.	
Additional Applications	1 lb. 4 lbs.	

THESE DILUTIONS A GALLONS OF W

1 part Dry Lime Sulfur will m parts of 325 mesh Sulfur.

Add 3 lbs. of Sherwin-Williams each 100 gallons of spray when

WRITE FOR FOLDER TELLING HOW TO CUT YOUR SPRAY BILL 1/3

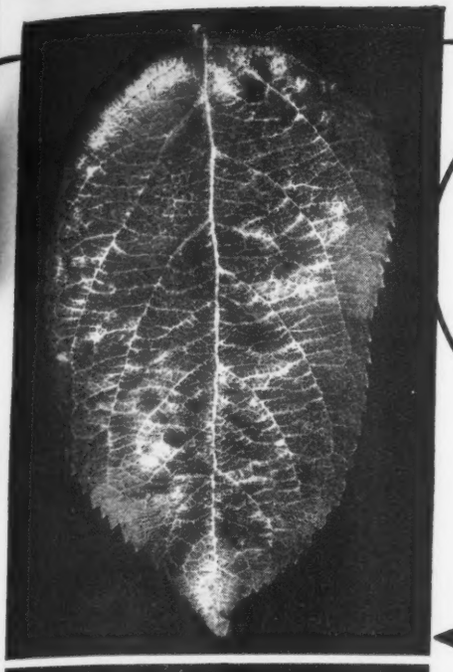


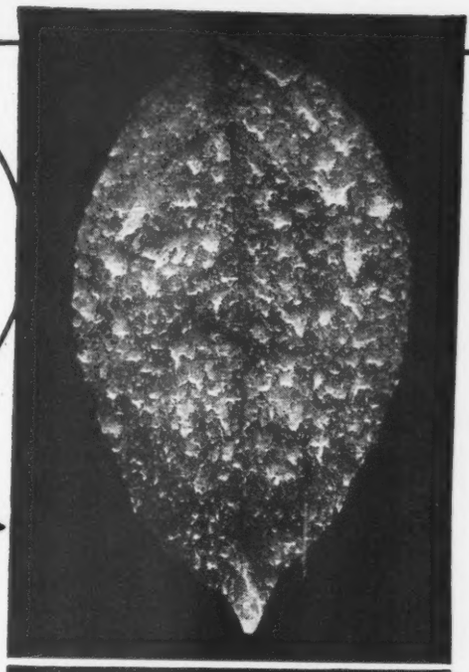
Announcement of this Dry Lime Sulfur-325 Mesh Sulfur combination is such real news that we urge you as a practical commercial grower to write at once for the special folder which tells you how this combination mixes, sprays and sticks, to reduce your summer scab control spray bill one-third by actual comparison of costs with old-time use of expensive wettable sulfurs. Study the Micro-Camera Proof presented on the opposite page—then write at once for full details of this new, economical way to make 325 mesh sulfur wettable with Sherwin-Williams Dry Lime Sulfur.

THE SHERWIN-WILLIAMS CO.
Insecticide Department
101 Prospect Ave. Cleveland, Ohio

SHERWIN-WILLIAMS
SPRAY AND DUST MATERIALS

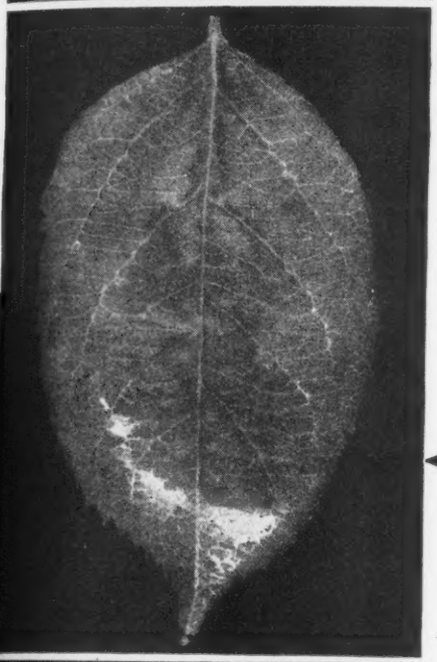
The MICRO-CAMERA tells the story





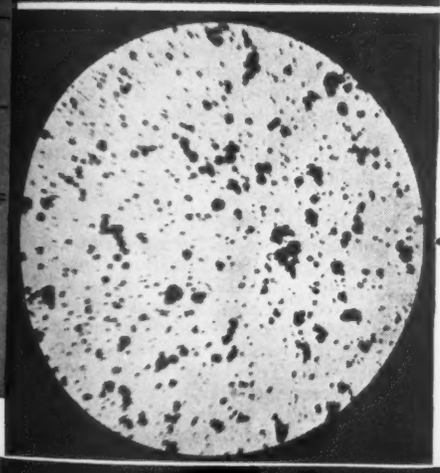
Cortland apple leaf sprayed with 2 pounds of Dry Lime Sulfur and 8 pounds of 325-mesh sulfur to 100 gallons of water. Note heavy, uniform deposit of colloidal, flocculated sulfur.

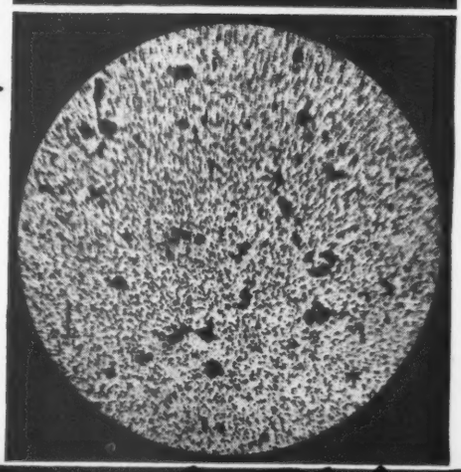
Cortland apple leaf sprayed with 10 pounds of 325-mesh wettable sulfur alone to 100 gallons of water. Note uneven, thin distribution of sulfur.



Same leaf as shown above after ½ inch rain. Note good coating of sulfur still remaining.

Same leaf as shown above after ½ inch rain. Note heavy run-off of sulfur, leaving the surface unprotected.





Micro-photograph of surface sprayed with 2 pounds of Dry Lime Sulfur and 8 pounds of 325-mesh sulfur to 100 gallons of water. The Dry Lime Sulfur in this combination has flocculated the sulfur and has also acted as a "tooth," holding the sulfur particles tenaciously to the surface.

Micro-photograph of surface sprayed with 10 pounds of 325-mesh wettable sulfur alone to 100 gallons of water. Note uneven distribution of sulfur particles and large unprotected area due to poor adhesive qualities.

●

This new Dry Lime Sulfur-325 Mesh Sulfur combination will actually deposit more than 3 times as much elemental sulfur per square inch of apple and leaf surface—as the average wettable sulfur used alone.

SHERWIN-WILLIAMS
SPRAY AND DUST MATERIALS

AMERICAN POMOLOGY

A Page Conducted in the Interests of the American Pomological Society

Edited by H. L. LANTZ, Secretary

ANNUAL MEETING

PROGRAM for the 52nd convention of the American Pomological Society will be held in co-operation with the Virginia State Horticultural Society at Roanoke, Va., December 8, 9 and 10, 1936.

The Virginia State Horticultural Society is the host. Secretary W. S. Campfield has local plans well under way for this joint meeting with the American Pomological Society.

This promises to be another regional convention, as was the meeting in Connecticut last year. The Connecticut State Pomological Society, our host last year, is already making plans for a pilgrimage to Roanoke. When the place of meeting for 1936 was discussed last December at the Hartford convention, a number of folks expressed their intention to attend the next meeting, provided it was developed as a regional meeting.

The helpfulness of the A.P.S. in connection with the program of these joint conventions has been well received. Growers and others interested in horticulture have been free to state that these meetings have been valuable and stimulating. All who can do so are urged to take advantage of this great convention.

And have you ever noticed that the fruit growers who attend horticultural conventions are the progressive leaders in the industry?

Fruit Varieties and Fruit Breeding

On December 8 the sessions will feature papers and discussions on fruit varieties, the breeding of new varieties, problems of nomenclature and problems connected with the organization and extension of variety testing and variety distribution.

In general, this particular day of the program will take time to work along the traditional lines which the American Pomological Society followed in the earlier days of its organization. This program is meeting with very cordial approval from many of the older members of the organization who have missed the pleasing discussions of earlier years centering around the merits of new introductions in the fruit world. It will also, of course, appeal to plant breeders, nurserymen and professional and amateur horticulturists who delight in the acquisition of collections of varieties and out of whose observations are finally selected the great commercial varieties in general use.

The Virginia State Horticultural Society joins with the A.P.S. in inviting growers and the horticultural societies of all the eastern states to participate in the coming convention. Here is your opportunity to profit from the exchange of ideas offered by such a gathering and at the same time enjoy the hospitality for which Virginia is famous!

Regional and National Problems

December 9 and 10 will be devoted to the service features of the work of both the American Pomological Society and the Virginia State Horticultural Society. These are aimed chiefly at regional and national problems.

The following subjects will be included in the program: The fruit grower and the Soil Conservation Program, the principles and practice of orchard irrigation with specific reference to eastern apple growing, improvements in orchard machinery, papers bearing on the spray residue situation, progress in organizing for promotion of apple consumption.

Final arrangements for speakers have not been confirmed in every case but the nationally recognized authorities will lead the discussions of these topics.

Growers' Problems

The third main feature of the meeting will be attention to problems of fertilization, insect and fungous control, and other cultural problems. Topics to be treated in this part of the program include the following: Orchard fertilization, varieties of peaches and pruning and management, progress in the spraying program in the peach orchard, year's results in codling moth control, modifications in spray schedules with reference to chemicals and times of application.

The detailed programs may be secured from W. S. Campfield, secretary of the Virginia State Horticultural Society, Staunton, Va., or from H. L. Lantz, secretary of the American Pomological Society, Ames, Iowa, any time after November 15.

Fruit Exhibits

An apple exhibit is being planned in connection with the convention. This feature is in charge of Prof. A. H. Teske, who has already sent out a call for exhibits. Prof. Teske says: "As a feature of the display, we would like to assemble a plate exhibit of the important commercial varieties from the various apple growing states. Such a display should prove to be very interesting."

Exhibitors are urged to co-operate by sending or bringing plate exhibits to the apple show. There is no better place than a fruit show to learn more about varieties. In addition to the exhibits of standard varieties, many new varieties will be shown. New varieties of promise and bud sports are always a center of attraction at any fruit show.

Wilder Medal Awards will be offered by the A. P. S. in connection with the new fruits which are exhibited.

Trade Exhibits

One of the most instructive features for fruit growers will be the trade exhibits. Here one can see all the latest developments in machinery, spray materials, fertilizers, packages, tools and other items of interest to fruit growers. These exhibits are manned by capable and well-informed men who know and appreciate many of the production and marketing problems of the fruit grower. Trade exhibits are coming more and more to be an integral part of our horticultural conventions.

Convention headquarters will be at Hotel Roanoke. The trade and fruit exhibits will be staged in the Roanoke Auditorium. Secretary W. S. Campfield's address is Staunton, and Prof. A. H. Teske's address is Blacksburg.

Membership

Memberships are still trickling in. Let's have a flood of them! Why not send in $2.50 for the years 1936 and 1937, and get the big report of the Hartford convention, as well as the report of the Virginia meeting when it is published. Life membership fees are $25. The latest addition to our list of life members is Dr. R. H. Roberts, pomologist at the University of Wisconsin. Dr. Roberts is well known for his important contributions on pruning the apple and cherry and is now carrying on extensive investigational work on the stocks question.

Annual dues in the A.P.S. are $1.25 per year, and may have to be raised. For this amount members receive a year's subscription to AMERICAN FRUIT GROWER and the big report of the annual convention of the society.

CALENDAR OF COMING MEETINGS and EXHIBITS

Nov. 3-5—Minnesota State Horticultural Society, in joint session with Minnesota Fruit Growers Assn., and various other horticultural organizations, Radisson Hotel, Minneapolis.—R. S. Mackintosh, Sec'y, Hort. Society, St. Paul. J. D. Winter, Sec'y, Fruit Growers Assn., 786 Eustis St., St. Paul.

Nov. 4-5—Wisconsin State Horticultural Society annual convention, Sturgeon Bay. H. J. Rahmlow, Sec'y, 1532 University Ave., Madison.

Nov. 10-12—West Virginia State Horticultural Society Apple Fair, Martinsburg.—Carroll R. Miller, Sec'y, Martinsburg.

Nov. 11-13—Iowa State Horticultural Society 71st annual convention, Memorial Union, Iowa State College, Ames. Various divisions of Iowa society, including Iowa Fruit Growers' Assn., Federated Garden Clubs of Iowa, Iowa Beekeepers Assn., Iowa State Vegetable Growers Assn., and Society of Iowa Florists, will hold annual meetings at same time.—R. S. Herrick, Sec'y, State House, Des Moines.

Nov. 13-15—Little Mid-West Student Horticultural Exposition, McKay Auditorium, Iowa State College, Ames.—R. S. Herrick, Sec'y, State House, Des Moines.

Nov. 17-19—Maine State Pomological Society annual meeting, Lewiston.—E. L. White, Sec'y, Bowdoinham.

Nov. 18-19—South Dakota State Horticultural Society annual meeting, Clark. —W. A. Simmons, Sec'y, Sioux Falls.

Nov. 18-20—Central Illinois Horticultural Society annual meeting, Peoria.—Leo J. Hagemann, Sec'y, Route 8, Peoria.

Nov. 23-24—Southern Illinois Horticultural Society annual meeting, Hardin.—Hugh Hale, Sec'y, Omaha.

Dec. 1-3—Michigan State Horticultural Society Apple Show, Civic Auditorium, Grand Rapids.—H. D. Hootman, Sec'y, East Lansing.

Dec. 1-3—Peninsula Horticultural Society annual meeting, Hurlock, Md.—J. F. Adams, Sec'y, Box 425, Newark, Del.

Dec. 3-4—Connecticut Pomological Society 46th annual meeting and fruit show, Woman's Club Bldg., Hartford. —H. C. C. Miles, Sec'y, Milford.

Dec. 3-4—Kansas State Horticultural Society annual meeting, Kansas State College, Manhattan.—George W. Kinkead, Sec'y, Capitol Bldg., Topeka.

Dec. 3-4—Northern Illinois Horticultural Society annual meeting, Mendota.—O. H. Waddell, Sec'y, Davis Junction.

Dec. 4-5—Montana State Horticultural Society annual meeting, Hamilton.—George L. Knight, Sec'y, Missoula.

Dec. 7-9—Washington State Horticultural Assn. annual meeting, Chamber of Commerce Bldg., Yakima.—John C. Snyder, Sec'y, Pullman.

Dec. 8-10—New Jersey State Horticultural Society annual meeting, Haddon Hall, Atlantic City.—A. J. Farley, Sec'y, New Brunswick.

Dec. 8-10—American Pomological Society 52nd convention in joint session with Virginia State Horticultural Society 41st annual meeting, Hotel Roanoke, Roanoke, Va.—H. L. Lantz, Sec'y, A.P.S., Ames, Iowa. W. S. Campfield, Sec'y, Va. Hort. Society, Staunton, Va.

Dec. 10-11—Missouri State Horticultural Society annual meeting, St. Louis.—W. R. Martin, Jr., Sec'y, 200 Whitten Hall, Columbia.

Dec. 11-12—Oregon State Horticultural Society annual meeting Hood River.—O. T. McWhorter, Sec'y, Corvallis.

Jan. 5-7—Nebraska State Horticultural Society annual meeting, Plant Industry Bldg., College of Agriculture, Lincoln. —E. H. Hoppert, Sec'y, Lincoln.

Jan. 6-8—Massachusetts Fruit Growers' Association annual meeting, Worcester Memorial Auditorium, Worcester.—William R. Cole, Sec'y, Amherst.

Jan. 12—Vermont State Horticultural Society winter meeting, Burlington, in conjunction with the Union Agricultural meeting.—M. B. Cummings, Sec'y, Burlington.

Jan. 12-14—Indiana Horticultural Society 76th annual meeting, Lafayette, in conjunction with Purdue Agricultural Conference Week.—Everett Wright, Sec'y, Lafayette.

Jan. 12-15—New York State Horticultural Society annual meeting, Rochester.—Roy P. McPherson, Sec'y, LeRoy.

Jan. 20-21—State Horticultural Association of Pennsylvania annual meeting, Harrisburg, during State Farm Show. —R. H. Sudds, Sec'y, State College.

Jan. 25-29—Ohio State Horticultural Society annual meeting at Ohio State University, Columbus, during Farmers' Week.—F. H. Beach, Sec'y, Columbus.

Jan. 27-29—Eastern meeting New York State Horticultural Society, Kingston. —Roy. P. McPherson, Sec'y, LeRoy.

Feb. 3-5—Idaho State Horticultural Association 42nd annual convention, Hotel Owyhee, Boise.—W. H. Wicks, Sec'y, Boise.

Feb. 3-5—Illinois State Horticultural Society annual meeting, Illinois Fruit Exchange Bldg., Carbondale.—Joe B. Hale, Sec'y, Salem.

Feb. 10-11—West Virginia Horticultural Society annual convention, Martinsburg. —Carroll R. Miller, Sec'y, Martinsburg.

STATE NEWS

FROM NEAR AND FAR

WISCONSIN—An exception to the law of supply and demand is illustrated in the 1936 Wisconsin apple crop. Apples have not brought the prices anticipated by the short crop because of poor quality of fruit marketed. Market tops were Wisconsin McIntosh, the pride of southern Wisconsin apple growers.

Delicious trees weakened by the severe winter produced surprisingly few apples.

The food supply of trees is not being neglected this year in a good many orchards. In the past few months considerable quantities of nitrogen fertilizer have been sold in the State. In addition to fall application being desirable from a cultural standpoint, the practice comes at a time when growers have available money.

Poor varieties, lack of fertilizers and improper soil treatment are responsible for more poor orchards in this State than any other cause.—H. J. RAHMLOW, Sec'y, 1532 University Ave., Madison.

IDAHO—A ray of light after four years of poor markets gladdened the hearts of Idaho growers when prices received for the 1936 apple crop again swung toward normal. These periods of silent endurance by American orchardists are all too often unpublicized. Yet it is through their perseverance that we can be thankful for the orchards we do have.

Interest on the part of growers and shippers in the coming annual horticultural association meeting on February 3-5 at Boise will undoubtedly be keen as a result of this market rise.—W. H. WICKS, Sec'y, Boise.

RHODE ISLAND—Considerable loss from dropped fruit and broken branches, especially near the coast, occurred when the tail end of a tornado struck Rhode Island orchards on September 18. Soil washing by a rainfall of 5.13 inches in 24 hours was averted, as cover crops were well started in most orchards.

To promote increased consumption of apples, pie-making contests, using State-grown fruit, will be staged in each county during early January. Various home economics groups will co-operate.

Winners of the county contests will have the honor of baking a pie for the State finals at the time of the Rhode Island Fruit Growers Association annual meeting in February. —E. P. CHRISTOPHER, Extension Horticulturist, Rhode Island State College, Kingston.

KANSAS—Excessive heat (not political) of August and early September caused a heavy drop of Jonathan and Grimes Golden. Remaining Jonathan fruits cracked badly after the rains came. Cracking is unusual for this variety.

Some leading Kansas orchardists are planning a fall application of nitrate fertilizer, believing growth of their trees will be materially stimulated this coming spring as a result.

As a post-presidential campaign letdown, a special program is being prepared for the ladies at the annual meeting of the horticultural society December 3-4 at Kansas State College, Manhattan, under the supervision of Misses Ellen Batchelor and Margaret Ahlborn of the State College.—GEORGE W. KINKEAD, Sec'y, Topeka.

FLORIDA—In the face of dwarfed apple crops, stunted grape harvests and depleted small fruits in general for 1936, Florida juggernauts onward with the greatest crop of highest quality citrus fruit that has been seen in the past seven years, according to Citriculturist E. F. DeBusk of the Florida State Agricultural Extension Service.

Paramount among the reasons for this unusual crop—the growers have been more thorough in this year's control of rust mite than ever before.

Volusia County growers, for instance, have increased their spraying 400 per cent this year. County Agent F. E. Baetzman states the purchase of spray machinery has increased greatly as a result.

MINNESOTA—That midwestern orchardists are becoming more and more progressive is attested to by the report Minnesota horticulturists are putting on pressure to make the International Horticultural Exposition given in Chicago September 12-20 a permanent exhibit.

Prizemaster of the show, D. C. Webster of LaCrescent, bagged: Championship award for best 10 trays of Northwestern Greenings, first prize with a plate of Haralson, and second on plates of Cortland, Northwestern and Wealthy.

Two-year-old Haralson apple trees in one of the larger Minnesota nurseries furnish a striking illustration of the importance of northern rootstocks grown from seed of hardy Minnesota apples. Trees on such stocks were vigorous and showed no winter killing.

In the same block Haralsons propagated on common western grown rootstocks showed weak growth, averaging about a foot shorter than the other lot, and more than half the trees were dead. Examination indicated the killing was due entirely to lack of hardiness in the rootstocks.—J. D. WINTER, Sec'y, St. Paul.

COLORADO—Over a million dollars for 1936 fruit crops marketed through the four co-operative associations in the Grand Valley have gone into the pockets of fruit growers in this section, with additional sums still to be received.

The 300 members of the United Fruit Growers Association of Palisade, largest co-operative now operating in the valley peach district, have been enriched by a total of $595,-203.89. A. M. Echternach is secretary-treasurer of the association. In addition to the 874 carloads of peaches shipped, large truck and express shipments were also made.

Growers marketing through the Co-operative Fruit Growers and Distributing Union Company of Palisade have received amounts aggregating $100,000, with further payments to be made by the association.

The Pacific Fruit and Produce Company has paid out to its members approximately $150,-000, and will be sending additional amounts.

A total of $200,000, in payment chiefly for peaches, has been made to Grand Junction Fruit Growers Association members.

During the peak of the shipping season, the D. & R. G. W. R. R. handled 1410 carloads of refrigerated peaches.

Truck movement of fruit out of the valley was unusually heavy. Hundreds of truckloads of fruit left the valley during the busy peach season. While much of this fruit was loaded out from the association platforms, many buyers bought direct from the growers. To reach the total value of the crop for the season, the amounts paid for this fruit would have to be added to the association totals.

IOWA—Warning to All Growers!! Killers at large this winter! Growers are cautioned by State authorities to be on the lookout for mice and rabbits. Rodents very likely troublesome in orchards and small fruit plantations due to hot, dry summer.

Two 15-year-old Grimes Golden orchards in close proximity furnished interesting observation so far as fruit development was concerned. Trees in both these Iowa orchards were somewhat injured by last winter's freezing weather but bore quite heavily. One orchard was cultivated, sweet clover being grown in the other.

Very little rain fell during the summer. Commencing in September and running through into October, there was an estimated six to eight inches of rainfall in these orchards.

In the cultivated orchard, little or no cracking occurred on the fruit when the fall rains started. In the sweet clover mulch orchard, cracking was pronounced.

Evidently cultivation kept the trees growing in better condition and as a result the apples were able to expand when the rains came.

Sweet clover should not be condemned because of this single example, since clover has caused the rejuvenation of some very poor land.

Jonathan apple prices in Iowa orchards have been running from $1.50 to $2 per bushel or better, first grade Grimes bringing almost

(Continued on page 20)

FRUIT POLLINATION

(Continued from page 9)

planted together, but it is inadvisable to extend the distance between a variety and its pollinizer to more than 150 feet.

After the plan has been tentatively arranged, it should be re-examined to discover whether a late blooming variety has been placed adjacent to a very early blooming one for mutual cross-pollination. In such a case a mid-season blooming variety should be shifted to the place occupied by the late blooming one. The late blooming variety can then be placed adjacent to a mid-season blooming variety where mutual cross-pollination will usually occur. In addition, a variety which is very late in coming into bearing may have been tentatively located as the only pollinizer of a variety which comes into bearing quite early. In such a case the variety tardy in bearing should be shifted to a less important place in the planting arrangement.

Finally, some attention should be given to differences in susceptibility of varieties to spray injury. The criticism has been made that too frequently in the past planting plans have been suggested which do not take this factor sufficiently into account. In defense of pollination plans suggested by horticulturists in the various experiment stations, the writer would suggest that it is practically impossible to satisfy this factor from an ideal viewpoint so long as numerous other qualifications are involved. Ballou and Lewis of the Ohio Experiment Station have classified a number of important commercial varieties into two groups based on differences in susceptibility to spray injury and apple scab. One group consisting of varieties susceptible to scab and not easily russeted includes Rome Beauty, Gallia Beauty, Delicious, Cortland, Stark, Yellow Transparent, McIntosh, Stayman Winesap, Winter Banana, and Northern Spy. The other group comprising those varieties easily russeted and only slightly susceptible to scab includes Baldwin, Jonathan, Oldenburg, Grimes Golden, Golden Delicious, Wealthy, and Wagener. It would seem desirable, so far as is consistent with the other considerations, to place those varieties adjacent which are in the same group, but, unfortunately, within any one fruit growing region the important commercial varieties do not fall within the same group. However, certain notoriously bad combinations can be omitted as, for example, McIntosh and Golden Delicious. The latter variety may be situated to effect a favorable cross-pollination and at the same time to escape the drift of toxic spray solutions applied to adjacent varieties.

Within the scope of this article it has been possible to consider the subject only generally. Individual situations demand individual consideration. Pomologists in the various experiment stations would, I am sure, be glad to check tentative plans and to make suggestions adapting these general recommendations to a more specific locality.

Boysenberry Proves Hardy On Ohio Fruit Farm

PROVEN by size, quality and vine-growth to be a superior member of the bramble family, the Boysenberry now has another characteristic in its favor—apparent hardiness. Although attracting much attention since its introduction, this fruit has had no severe tests in northern sections until this year.

On the fruit farm of H. W. Schmitkons, near Lorain, Ohio, is a patch of Boysenberries that went through the past winter. It was exceedingly questionable whether or not the vines would bear fruit after the low temperatures; many peach buds had been killed. Mr. Schmitkons had trellised his plants and was hoping for the best in the way of a crop this year.

Apparently temperatures that prevailed during the past winter caused little damage to the plants as he had a fine crop of excellent fruit this summer.

The entire plant seems to have this hardiness. A planting went through the winter near Washington, D. C., in good condition while Youngberries planted close by were killed to the soil level.

The Boysenberry runs approximately one inch in width and from one to one and one-half inches in length. Its fine flavor and excellent appearance of the pack, along with firm flesh, create a consumer demand, say those growers who have produced the new fruit.

From a triple cross, involving Loganberries, blackberries and raspberries, Boysenberries were bred by Rudolph Boysen, superintendent of parks at Anaheim, Calif. The first of the new fruit plants were distributed to nurseries in 1932.

A Washington Navel orange tree of the standard strain of this variety in flower and fruit. It is through the systematic selection of such trees as this that the efficiency of the variety for profitable fruit production is being maintained and improved.

BUD SELECTION

(Continued from page 7)

found, tested, and propagated experimentally and commercially. The trees of these strains differ in one or more characteristics from the parent varieties, as, for example, in earliness of maturity, color, shape, thickness of peel or other fruit characters, or vigor of the vegetative growth. In one of the new Washington Navel orange strains, the Robertson, the oranges reach market maturity about one month earlier than is the case with those of the parent variety.

A similar statement to the foregoing could be made, if space permitted, with regard to certain widely grown canning and other peach varieties, of apples and other deciduous fruits. These superior strains, as well as those in citrus, originated as bud mutations, usually limb sports, that have been found, tested, and finally adopted for commercial growing in certain districts to which they are particularly adapted.

The possibility of finding bud mutations in the trees of our commercial fruits is open to all growers and other interested persons. If a valuable one is discovered as proven through progeny tests and commercial experience, the discoverer will have the satisfaction of contributing something worth while to the industry with which he is connected. The writer would like to urge fruit growers to keep a sharp lookout for striking fruit or foliage variations in their trees and, if one or more are found that appear to have some valuable characteristics, to find out as to whether or not the variations are inherent ones, bud mutations in fact.

In the first place, the typical fruit and foliage characters of the varieties under observation should be studied so that their characteristics are clearly in mind at all times. This course of preparation requires some effort on the part of the uninformed, but through patient examination there is no good reason why all intelligent fruit growers cannot acquire this fundamental and intimate foliage and fruit knowledge. It is particularly important in the search for bud sports because it enables the searcher to distinguish the unusual from the normal forms, sometimes at a glance.

If early maturity is desired, the trees should be looked over two or three weeks before the normal crop is ready for harvest. Early-maturing fruits or limbs bearing several such fruits can be most easily located at that time, particularly if maturity is indicated by a change in the color of the fruits. Limbs bearing late-maturing fruits can usually be found most easily during harvest or shortly after the main crop has been picked, where the unripe fruits are left on the trees by the pickers. Limbs bearing fruits having a peculiarly desirable color, shape, size, texture, or other characteristic of commercial importance can usually be best found just before the harvest season or during the picking period. Foregoing comments apply to entire-tree variations as well as to individual fruit and limb sports.

When found, the limb or entire-tree variations should be marked and their location recorded so that they can be found easily at all times of the year. It is desirable to observe the performance of the limb or entire-tree vari-

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APPLE CULTURE FOR DRY SECTIONS

(Continued from page 11)

the plow, that went below the surface loam and dug into the clay strata, throwing out clay lumps and forming a clod cover over the top of the ground.

"Across the field, diagonally to the wind, I planted tall crops, subdividing the ground into plots of long strips. They assisted in checking the force of currents of hot air. In the deep sand sections of the field, blackberry plants formed an excellent windbreak. I planted grapes and trained them over high trellises along the side of the field where the wind enters.

"I learned that in blow sand, plowing should follow immediately after a rain. The sand granules are then pressed into clods, which check the dust whirls and offer a resistance to air currents.

"In planting an orchard, the rows should be set in alternating spaces rather than in regular square formation. As the branches spread, the trees fill the open spaces and form an almost solid windbreak.

"I have found, also, that a ground cover crop is perhaps the most effective erosion preventive. In this section Colorado grass is a good selection. Doubtless, in other places, field peas, clover, soy beans, or vetch, would be preferable.

"I am thoroughly convinced that fertilizer is essential for the heaviest yield and for the highest quality of fruit. But, in dry sections, fertilization must be cautiously practiced. I haul manure from stock pens four miles each fall and scatter it over the entire ground as far out as the tips of the apple trees extend.

"Our one pest which is more serious than the droughts is the codling moth. I am forced to spray often, but use a simple method of catching the larvae of this pest which greatly reduced the number. In the early spring I tie a heavy cloth band around each tree, supplying the moth with a convenient place for hibernation, and each week the cloth is removed and dipped into boiling water. I have counted more than a hundred larvae webbed in a single cloth trap. I have learned too that the trees which grow near rubbish are the worse infested. All leaves and rubbish I gather up and burn in the fall."

"Mr. Browning," I interrupted, "tell me about the most important phase of your farming. What about profits?"

"I am not sure that financial profits are the primary remunerations," be objected. "To me, values are not estimated in dollars, but in the degree of one's progress and in the richness of one's experiences.

"Although my financial profits have not been enormous, they have been satisfactory. During the past seven years, when business men have been pressed by debts, and many of them forced into bankruptcy, I am grateful that my orchard has profited me approximately $2500 annually.

"But for this condition I am more grateful: I am happy. My family and I love our orchard, and our hearts are in the work; we have no fear of poverty; we feel an absolute security. And we are planting a young orchard. We want to apply the fundamentals that we have learned from experience. Look over there (pointing to a 20-acre block of ground) and see those young trees with peanut vines growing between the rows. That we hope to be the perfectly started and developed orchard."

FIRE BLIGHT

(Continued from page 8)

upper and lower ends. After cutting, the wound should be washed with corrosive sublimate to prevent secondary infection, and then covered with a wound dressing. Tools used for the cutting should be disinfected in corrosive sublimate.

Pacific Coast workers have found that a solution composed of six pounds of zinc chloride in one gallon of denatured alcohol, one pint of water and three ounces of concentrated commercial hydrochloric acid gave good control when painted on the canker if the disease did not extend into the trunk of the tree.

ANIMAL PEST CONTROL

By WILLIAM H. ZIPF

MICE, rabbits, ground squirrels, gophers, moles and burrowing turtles —all are potential pests of fruit growers in various sections of the country. These animal pests are capable of causing extensive damage where they are present in large numbers. They are often so vicious in their attacks on fruit trees that growers must resort to bridge-grafting or inarching to save their damaged trees.

Mice, because of their capacity to breed in large numbers, are becoming increasingly dangerous in the orchard. Their rapid multiplication means that the orchardist cannot for even one season halt the battle against this pest. A pair of mice, it is said, produce four to six litters per year with an average of four to six surviving young to the litter.

The common meadow mouse invades the orchard in the fall when other sources of food are no longer available. They make runways and tunnels through grass and litter under the trees, gnawing the trunks of the trees at or near the surface of the ground.

In the South the short-tailed pine mouse is more destructive than the meadow mouse. This type migrates from the timberlands into the orchards, burrowing tunnels and runways under the ground surrounding the trees. They feed on the bark of the trunk and roots.

Most kinds of fruit trees are subject to girdling by rabbits during the winter months. Hardware mesh wire placed about the trunks of the trees to a height of about 24 inches and three to six inches below the soil surface will prevent injury from both rabbits and mice, but in large plantings the cost of such procedure may be prohibitive. Wood veneer protectors and heavy paper, both waste sheets and that especially prepared for the purpose, have also been used. Mesh wire having four meshes per inch has been found most effective.

After several seasons of testing various materials for their efficiency as rabbit repellents, Michigan State College workers recommend a mixture that is inexpensive and easily prepared. It consists of five parts of resin and one part of linseed oil. These ingredients are melted together and applied with a brush. Application is rapid and easy, and the repellent has proved effective in preventing rabbit injury to trees. The mixture is not harmful to the tree as tested by the Michigan workers.

Several commercial repellents have been found satisfactory when used according to manufacturers' directions.

Particularly in the West and South are ground squirrels injurious to fruit trees. In Florida the ground squirrels are popularly known as "salamanders." They tunnel to the tree about a foot below the surface of the soil. In Florida strychnine poison bait is the recommended control. In addition to the poison bait, California recommendations call for encouragement of the natural enemies of the ground squirrel, the use of carbon bisulphide in the burrows of the pest, and trapping and shooting.

The common mole, too, is controlled by trapping and by the use of carbon bisulphide in the tunnels. Carbon bisulphide is a liquid which when released gives off a gas heavier than air. When placed in the burrows and tunnels the gas travels downward, smothering the rodents.

Michigan State College resin-oil rabbit repellent mixture applied on outside trees; center tree untreated.

Another pest of the South is the burrowing turtle, which seems to be particularly fond of the roots of pecan trees, but may be found feeding on young fruit trees. The turtle digs a deep hole, usually with but one entrance. Control is effected by throwing a piece of rag or handful of cotton saturated with carbon bisulphide

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STATE NEWS

(Continued from page 16)

as much, and Delicious more. Excellent demand for apple cider prevails in many places, as high as 55 cents a gallon being received where the container is included.

Apple trees defoliated by grasshoppers this summer have again leafed out. If they harden off sufficiently before severe temperatures occur, the younger trees will undoubtedly survive the ravages of this pest. Severity of winter freezing and maturing of wood and buds this fall will determine whether old trees defoliated by grasshoppers will come through the winter satisfactorily.—R. S. HERRICK, Sec'y, Des Moines.

PENNSYLVANIA—Although hail visited up to 90 per cent of the apple orchards in one of the major carlot counties in the south central part of the State, quality of the fruit was good. Harvesting of the 1936 apple crop in southern Pennsylvania got under way about a week earlier than in 1935.

Hail also caused considerable damage to Adams County's Elberta peaches during harvest.

By sulphur dusting his hail-injured peaches as soon as possible following the storm, F. E. Griest of Flora Dale found that they kept well for the normal period expected of stone fruits. Similar hail-marked peaches not sulphur-dusted did not keep.—R. H. SUDDS, Sec'y, State College.

INDIANA—Not to be again outdone by growers in other parts of the State, northern Hoosiers greatly increased their number of competitive fruit exhibits at the State Fair over previous years. Total amount of competing fruit was less than last year. Quality of fruit in entire show was very good, according to Judge Dr. J. H. Gourley.

Among frequent winners were the Doud Orchards, Denver; Grover Cochran, Muncie; Lilly Orchards, Indianapolis; Bradford Orchards, Martinsville; Albert Weil, Evansville; Vivan Fielding, Connersville; Simpson Orchard Company, Vincennes; Klassen Brothers, LaPorte; and John D. Smith, Tipton.

Following on the heels of the State Fair when enthusiasm was still high, the state display of fruits, flowers, vegetables and honey for the International Horticultural Exposition was completed, and won first place among the competing state horticultural society exhibits.

Irrigation was resorted to by a few growers this year to offset effects of the drought. Sanford Fletcher near Middletown had marked results in size and color increase on an irrigated Delicious block.

Largest installation was made by Frank I. Odell of Sunnycrest Orchard, Cannelton, too late to obtain best results this year. In his setup he is raising the water over a 200-foot hill adjacent to the Ohio River and distributing it through pipes to the orchard some 2000 feet farther away.

Other growers using irrigation include S. W. Holmes, Mitchell; Harry Bamesberger, Valparaiso; and A. C. Hainlen, Converse.

To maintain sufficient early vigor to carry the trees through a heavy blossom and fruit setting period next spring, some growers have been applying nitrogenous fertilizers. Generally, bud set for next year's production seems good.—EVERETT WRIGHT, Sec'y, Lafayette.

PEST CONTROL

(Continued from page 20)

down the burrow and then stopping up the entrance with a heavy layer of soil.

The pocket gopher is said to be the most important rodent pest of citrus trees in the Southwest. The ominous factor in the work of this pest is that its presence is not easily detected until months after the injury was done. They gnaw away the bark on the crown roots and the lower portion of the trunk. Methods of control for the ground squirrel are applicable to the gopher, with the suggestion that precautions be taken against the latter pest even when they are not noticed about the orchard or grove.

In orchards and groves where clean cultivation is practiced, the abovementioned pests are usually less troublesome. Cultivation serves to destroy the burrows, tunnels and breeding places of the rodents and thus gives some control without the use of other measures. Brush piles and other artificial cover in orchards are breeding places for the pests.

For mice, gophers and ground squirrels poison bait is the most efficient control. The bait should be placed, previous to migration if possible, at strategic points in the orchard, in tin cans, small-mouthed bottles or tin or wood protectors. Containers may be purchased or they may be made at home at small cost. The containers protect the bait from the weather and from other wild life. The number of containers used depends on the intensity of the infestation. When heavy, it is best to place a container under each tree, while in lighter infestations it is usually necessary to treat only from one-fourth to one-third of the trees.

The larger animal pests are frequently controlled by trapping. This method gives satisfactory control where used and growers often benefit from the sale of the hides of the trapped animals.

Poison bait may be made at home from the formula available at state experiment stations and colleges or may be purchased through the horticultural departments of the U.S.D.A. and several of the experiment stations. There are also commercial baits on the market.

BUD SELECTION

(Continued from page 18)

ations for two or more seasons in order to determine whether or not their performance is consistent. When assured that the variations occur regularly and that they may have some superior characteristics to the normal forms, progeny tests should be carried out to determine if they are inherent and capable of perpetuation through bud propagation. In tree fruits this has been accomplished through top-working bearing trees or by using buds obtained from the selected variations for use on seedling stocks. The top-working practice is likely to give the earliest possible fruiting results, but the nursery-tree method is usually considered to be the most dependable one, especially if quantity of production is a character that is under consideration.

In any event, it is often advisable for those studying bud variation to obtain the opinion and advice of those trained in their study. The state colleges of agriculture, the U. S. D. A., and related institutions can usually be called upon for helpful assistance.

PELT AWARD

For excellence in handling a muskrat pelt, Otis A. Burnett of Conneautville, Pa., was awarded $750 in the Seventh National Fur Show.

It was announced by the Agricultural Foundation of Sears-Roebuck that the major award for the Eighth National Fur Show has been increased from $750 to $1000.

Many fruit growers are interested in trapping because it offers them revenue from pelts and at the same time rids their orchards of troublesome animal pests.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933, Of AMERICAN FRUIT GROWER, published monthly at Cleveland, Ohio, for October, 1936.

STATE OF OHIO } ss.
COUNTY OF CUYAHOGA }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared E. G. K. Meister, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the AMERICAN FRUIT GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, American Fruit Grower Publishing Company, 1370 Ontario St., Cleveland, Ohio; Editor, J. H. Gourley, 1370 Ontario St., Cleveland, Ohio; Managing Editor, Dean Halliday, 1370 Ontario St., Cleveland, Ohio; Business Manager, E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

American Fruit Grower Publishing Company, 1370 Ontario St., Cleveland, Ohio; E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio; R. B. Campbell, Richmond, Virginia; Mary Lee Adams, Greenwood, Virginia.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is

(This information is required from daily publications only.)

E. G. K. MEISTER,
Business Manager.

Sworn to and subscribed before me this 12th day of September, 1936.

(Seal)

H. Willkom, Notary Public.
(My commission expires October 17, 1938.)

SUCCESSFUL ORCHARDS

● A "ROUND TABLE" PAGE FOR EVERY GROWER ●

SUCCESSFUL CONTROL OF APPLE BLOTCH

"EVERY successful grower of apples in the Middle West knows that apple blotch may be controlled by frequent application of Bordeaux mixture applied at intervals during the growing season," says Fred S. Merrill, operator of the Central States Orchards Co., Inc., Chillicothe, Mo.

"The same growers also know," he continues, "that under normal conditions the early sprays are applied during the season of heaviest rainfall and highest relative humidity. When Bordeaux mixture is applied during extremely wet weather, the hazard of fruit and foliage injury is increased even though the strength of the mixture is reduced.

"The most important injury caused by the application of Bordeaux under unfavorable conditions is that of fruit russeting. Another injury, not so apparent, is the reduction of photosynthesis, or food manufacture by the plant, when the leaves are kept covered with lime, resulting in smaller sized or poorly colored fruit. Too often the so-called 'best' growers, who spray most thoroughly, are the worst sufferers. They secure commercial control of the disease at the sacrifice of high-quality fruit through russeting or dwarfing or, even worse, a combination of both.

"All of these mishaps had been our portion and we were faced with the necessity of removing all blotch-susceptible varieties or discovering a more rational method of control. Since 1924, we have had increasingly satisfying results from using a delayed dormant application of 6-6-50 Bordeaux mixture plus one per cent dormant oil, applied with the thoroughness of a dormant scab application.

"Under our original tests we found that we could omit the first two summer sprays recommended for blotch control—those that are usually applied during periods of high humidity and the season when russeting is most serious. We followed the later season sprays for a number of years, but now we find our one delayed dormant spray per year completely eradicates blotch on such susceptible varieties as Duchess, Maiden Blush, Huntsman, Ben Davis and Missouri Pippin.

"This program, combining as it does safety with economy and effectiveness, goes far in making possible the successful growing of many very productive and profitable varieties whose greatest fault is susceptibility to apple blotch."

BOXES FOR PEACHES APPROVED BY READER

AN item appearing in the September issue of *American Fruit Grower* on packing peaches in boxes attracted the attention of Clarence W. Tibbals, 124 Atwater St., New Haven, Conn., who sends in the following comment:

"There is some complaint here this year that peaches picked before becoming ripe and packed in baskets were bruised en route and became rotten before ripening. How extensive this criticism is I am unable to determine; it would appear to me that the retailer has some justification for his assertion that peaches packed in boxes arrive and market in better condition.

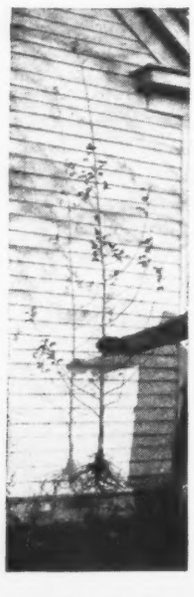
"I have no particular object in sending you this information, but wonder if the shippers of peaches would not like to think the matter over."

This unbiased observation by an interested reader presents food for thought to the peach grower.

This page is a place for growers to get together and exchange experiences and ideas. The beginner, as well as the veteran, will find here many practical suggestions for better and more profitable fruit growing. In return for the helps you receive from this page, be ready to pass on, for the benefit of others, any new idea, method or procedure you have developed or run across. Just jot it down as it occurs to you (a postcard will often do) and mail it to the "ROUND TABLE EDITOR," AMERICAN FRUIT GROWER. Don't worry about fancy writing. What the readers of this page want are practical pointers—that are to the point.

ONE YEAR APPLE TREE HAS RECORD GROWTH

"WE have produced a one-year apple tree that we think is unusual," says Asa Kelly of Fordsville, Ky., "because," he continues, "it is 10 feet tall and has a caliber of more than an inch. The tree has numerous side branches that are well-developed. The tree (shown in the accompanying illustration) was propagated by budding and was grown under regular nursery row conditions."



The matter of phenomenal growth of young stock is always of interest and the Round Table editor would like to have similar experiences of other growers on the development of their nursery stock.

GRAFTING POINTERS GIVEN BY GROWER

THE coming of the dormant period for fruit trees brings thoughts of pruning and grafting to the minds of growers. W. F. Shwey of Vienna, Va., has written of some of his ideas regarding grafting operations. He says:

"When grafting I use friction tape instead of wax. This might be due to the fact that I lost several grafts because they were killed by the tallow of the wax. There may have been too much tallow, but I have found that the tape does a fine job of protecting the grafts and is easily removed after growth has started. The tape must be removed or it will have a tendency to kill the graft. Many growers make a mistake by leaving the tape on the grafts thinking perhaps it will give protection. This sort of protection might be needed in some parts of the country but in our section I find that it is best to remove the tape and thus be sure no injury results.

"When splitting the limb I make a small wedge on each side and then slip the scions in the opening provided by these wedges. I usually wrap the graft from the bottom up, making sure that each band of tape overlaps the previous band. This prevents entrance of water which might cause trouble should there be a freeze after the graft is made."

Some of our Round Table readers might suggest to Mr. Shwey that he provide added safety by coating the friction tape with wax. Send in your ideas on grafting.

TERRACED FIELD PROVIDES FRUIT

A 15-ACRE field with 10 terraces of many kinds of fruits is providing a good income for R. L. Pollard of Randolph County, Alabama. On each of the 10 terraces is growing a different fruit, ranging from walnuts and peaches through apples, pecans, plums and apricots to pears, persimmons, cherries and figs.

W. M. Pollard, brother of R. L. Pollard, of Wedowee, Ala., writes of the figs planted in the terraced field:

"The terrace on which the figs are located is down in the bottoms and is set out with every variety of fig that will do well in this section. My brother makes more money from his figs at a dollar a peck than from any of his other fruit.

"The figs are heavy, annual bearers and are in good demand. Most customers like figs, and the housewives say they can be used in a number of ways that will appeal to almost every appetite.

"R. L. has done a good bit of work with grafting of the various fruits in the field and one apple tree is grafted with four different varieties, May, June, Arkansas Black and Winesap. Last year one side of this tree was bearing ripe fruit in May while the other side still had blossoms. One of the terraces is set out in pecans, some of which are grafted in hickory-nut stubs.

"R. L. says he could not afford to farm his 90 acres were it not for the orchard bringing him some income during the entire year."

Northern Nut Growers Meet

THE Northern Nut Growers' Association held its 27th annual meeting September 14 and 15 at the New York State Agricultural Experiment Station, Geneva, N. Y. A crowded program that emphasized nut culture in the northern tier of states, extensive exhibits of all classes of hardy nuts, members present from nearly all the northern states, and the transaction of several important items of business characterized the meeting.

Considerable time was devoted to a discussion of varieties and D. C. Snyder of Iowa reported on a detailed survey of the varieties discovered in the earlier nut contests. It was emphasized that the variety question is far from settled and that systematic variety testing must continue to be a major activity of association members.

To co-ordinate the variety testing, a new committee on "Varieties and Contests" was created to take over the activities of the committee on "Hybrids." This committee was assigned the duties of formulating a set of judging standards for the different classes of nuts, the holding of contests, the preparation of a list of recommended varieties of nuts for the different sections of the country, this list to be revised annually and published in the annual report of the association, and the collection of information concerning new varieties as they are brought to light. Such a committee should do much to clarify the variety situation.

The nut plantings of the experiment station, consisting of three filbert orchards, were inspected, as were the hybrids between the English and black walnuts which were fruiting. Various phases of the propagation of fruit plants were shown and explained by H. B. Tukey and K. D. Brase.

On September 16 the association met in Ithaca and listened to an inspiring address by Dr. L. H. Bailey, who told of some of his early experiences in nut culture.

The 1937 meeting will be held in Washington, D. C., September 13 and 14. The present officers who were re-elected for the ensuing year are president, Dr. G. A. Zimmerman, Harrisburg, Pa.; vice-president, J. F. Wilkinson, Rockport, Ind.; treasurer, Carl F. Walker, Cleveland, Ohio; and secretary, G. L. Slate, Geneva, N. Y.—G. L. SLATE, Sec'y, Northern Nut Growers' Assn., Geneva, N.Y.

Picking Controversy

(Continued from page 3)

ahead of my fellow pickers. There is not much difference among first-class pickers. One man picked 268 bushels in one day not long after I set my record, and sometimes several men would top 250 bushels on the same day in top-notch picking.

Very truly yours,

Roger Carl Moore,
New York, N. Y.

"STILL FROM MISSOURI"

Dear Mr. Moore:

In my younger days I was quite a picker of all kinds of fruits and vegetables. I did not keep any records of amount of work done, or speed, but I have a fair idea as to a day's work. As I was one of the crowd when a fellow Missourian coined the phrase, "I'm from Missouri, you will have to show me," I just took the privilege of questioning your statement.

Originally I allowed 12 hours for your record of 276 bushels per day, but as you have cut the time to a 10-hour day, that makes the arithmetic easier. You can find the number of apples packed to the bushel on practically all bushel boxes and baskets. I took 180 as a good average for Baldwins and also as a good figure to use with 60 minutes.

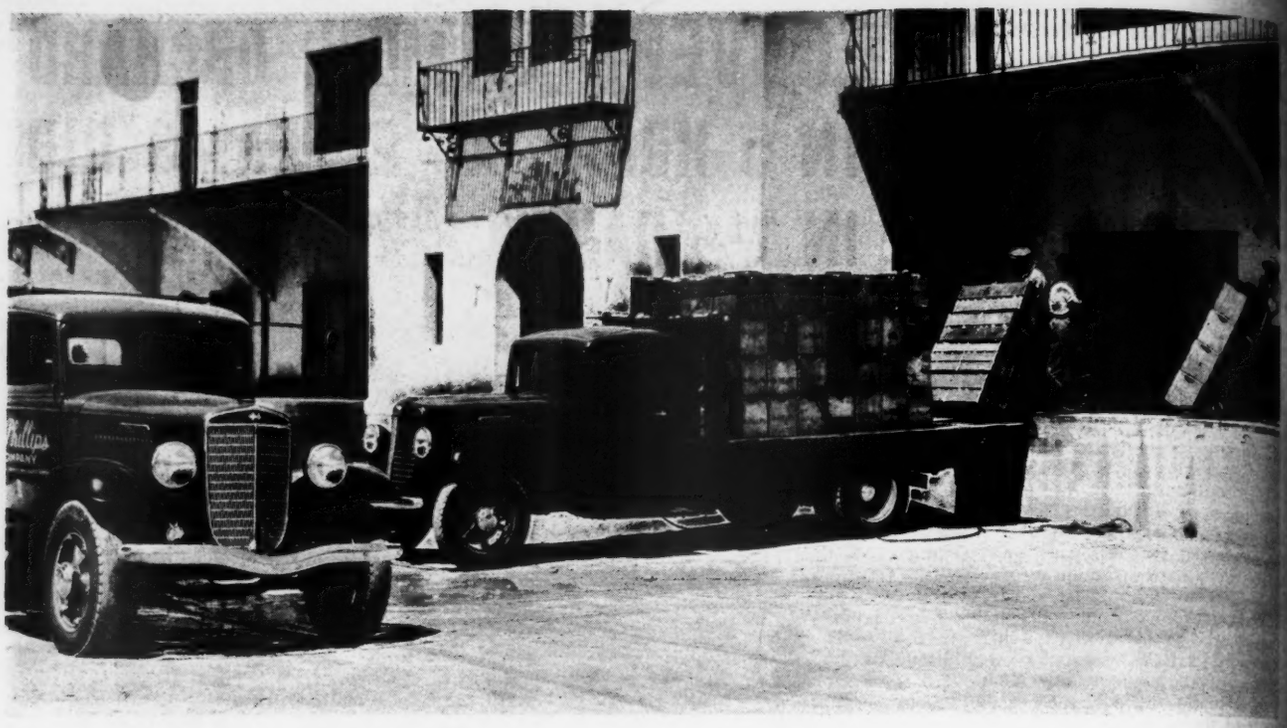
Two hundred seventy-six bushels in 10 hours (your figures) averages 27.6 bushels per hour, times 180 equals 4,948 apples per hour or 82.5 per minute. Allowing two apples per grab gives us about one and one-half seconds to make a grab. No time allowed for moving ladder, emptying sack, etc. Well, I'll say that if I had picked apples at that rate for half a day an hour's noonin' would be too short, and then if I had repeated the same in the afternoon, Jiggs would surely have had some competition at the corned beef and cabbage.

In my apple picking days we were cautioned to pick only first-class merchantable apples. None were to be bruised by knocking on branches or by rough handling, nor to be pierced by twigs. Any dropped apples were never picked up as most of our crop went to foreign markets. The fruit had to be good. You state that you picked bushels "off the ground beneath a tree." Such apples we sent to the cider mill or pig pen. I wonder what yours went for.

For about 12 years I traveled from western Kansas to eastern Maine but I never got into Maryland farther than Baltimore. I realize now that I must have missed something. I am quite anxious to see the Maryland apple trees that you describe. A tree that you could reach from near the center to an outlying branch, and one that you could go around with four eight-foot swaths (32 feet) would be a rather small 20-year-old. There would be a lot of moving from tree to tree to get 276 bushels.

Brother, you might be right, but "I'm from Missouri." I'll have to come and visit Maryland.

Respectfully,
Henry G. Miller.



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